

L244: (7) ceramic same... | US 6008151 | Tag: S.T1 | ...

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Sasaki et al.

US 6008151 A
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(54) NON-MAGNETIC CERAMICS AND
CERAMIC MULTILAYER PARTS

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501/52

(58) Field of Search 501/17, 32, 40,
501/52

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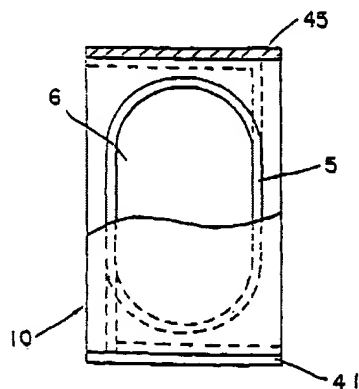
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(57) ABSTRACT

The invention provides a nonmagnetic ceramic comprising 5% to 40% by weight of quartz and 5% to 40% by weight of fine silica dispersed in 35% to 75% by weight of borosilicate glass as a matrix, the borosilicate glass having SiO₂ and B₂O₃ contents: SiO₂ 70 to 90% by weight and B₂O₃ 10 to 30% by weight. Using the nonmagnetic ceramic, multilayer ceramic inductors are obtained. When the ceramic is used as ceramic multilayer parts having an inductor section, it has a low dielectric constant and good characteristics in the high-frequency region, allows for low-temperature firing enabling the use of silver electrodes, prevents chip deformation and crack occurrence upon sintering, and provides a higher mechanical strength.

8 Claims, 7 Drawing Sheets



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TITLE: Non-magnetic ceramics and ceramic multilayer parts

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Detailed Description Text - DETX (27):

The constructions of respective sections of the multilayer ceramic inductor may be selected from the construction of JP-A 35982/1997 and prior art well-known constructions. For example, the outer shape is approximately rectangular parallelepiped. In most cases, as shown in FIG. 1, the internal conductor 5 is spirally extended within the nonmagnetic ceramic layers 6 to construct an internal winding while opposite ends of the internal conductor 5 are connected to the external electrodes 41 and 45. The winding pattern of the internal conductor 5 is not particularly limited, and the number of turns may be properly selected in accordance with an intended application. The number of turns which can be set herein is usually 1.5 to 15.5 turns. The dimensions of respective sections of the multilayer ceramic inductor are not critical and may be properly determined in accordance with an intended application. The nonmagnetic ceramic layers are about 20 to 100 .mu.m thick. The external electrodes are usually about 10 to 100 .mu.m thick, while the total thickness

Details | Text | Images | HTML | KWIC

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2	<input type="checkbox"/>	US 6551426	20030422	13	USPAT		Manuf
3	<input type="checkbox"/>	US 6388540	20020514	38	USPAT		Distrib
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6	<input type="checkbox"/>	US 4479100	19841023	9	USPAT		Imped
7	<input type="checkbox"/>	JP 01047011	19890221	6	JPO		LC CC